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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/851,325

05/09/2001

Jae-Sung Cho

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05/15/2003

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EXAMINER

BOOTH, RICHARD A

ART UNIT

PAPER NUMBER

2812

DATE MAILED: 05/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/851,325

Applicant(s)

CHO, JAE-SUNG

Examiner

Richard A. Booth

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) 14-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 32-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Election/Restrictions

Applicant's election of group I in Paper No. 5 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1, lines 11-12, state that the protrusions extend from the first layer of the double-layered gate lines. However, it appears from the specification that the protrusion extends from the common line. Therefore, the specification fails to teach how to make a LCD device with protrusions extending from the first layer of the double-layered gate line.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 32-46 are rejected under 35 USC 103(a) as being unpatentable over
Admitted prior art in view of Shimada et al., U.S. Patent 5,182,620.

Admitted prior art shows the invention substantially as claimed including first and second substrates; a plurality of data lines 13 on the first substrate; a plurality of gate lines 14 comprising first and second layers, for example, aluminum, on the first substrate perpendicular to the data lines 13; a common line 12 comprising first and second common line layers, for example, chromium, in the pixel region parallel to the gate lines 14; a plurality of common electrodes in the pixel region parallel to the data lines and extending from the common line; a thin film transistor T in the pixel region near the intersection of the one gate line and the one data line, the thin film transistor having a source electrode 17, drain electrode 19, and gate electrode 21; and a liquid crystal layer interposed between the first and second substrates (see figs. 1, 2A-2D, and page 3, line 11 to page 8, line 7 of specification).

Admitted prior art fails to expressly disclose a protrusion extending from the common line. Shimada et al. discloses a common line 8 having a protrusion (see fig. 1) in which a contact hole lies (see fig. 1 and col. 2-line 62 to col. 3-line 11) in the central

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portion thereof, where the hole is quadrilateral or square shaped (again, see fig. 1). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Admitted prior art so as to form a protrusion extending from the common line with a contact hole therein because this is shown by Shimada et al. to be a suitable structure for a liquid crystal display.

With respect to claim 46, note the presence of an etching hole over the contact hole in Shimada et al..

Claims 32-37 and 40-44 are rejected under 35 USC 103(a) as being unpatentable over Admitted prior art in view of Kuo, U.S. Patent 6,424,397.

Admitted prior art shows the invention substantially as claimed including first and second substrates; a plurality of data lines 13 on the first substrate; a plurality of gate lines 14 comprising first and second layers, for example, aluminum, on the first substrate perpendicular to the data lines 13; a common line 12 comprising first and second common line layers, for example, chromium, in the pixel region parallel to the gate lines 14; a plurality of common electrodes in the pixel region parallel to the data lines and extending from the common line; a thin film transistor T in the pixel region near the intersection of the one gate line and the one data line, the thin film transistor having a source electrode 17, drain electrode 19, and gate electrode 21; and a liquid crystal layer interposed between the first and second substrates (see figs. 1, 2A-2D, and page 3, line 11 to page 8, line 7 of specification).

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Admitted prior art fails to expressly disclose a protrusion extending from the common line. Kuo discloses a protrusion 408b emanating from a common line 408a (see fig. 5A and col. 6-lines 4-35). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of the Admitted prior art so as to include the protrusion of Kuo because this will increase the brightness of the LCD.

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Claims 32-37 and 40-44 are rejected under 35 USC 103(a) as being unpatentable over Admitted prior art in view of Lee et al., U.S. Patent 6,509,939 or KR 2000007760A (foreign equivalent).

Admitted prior art shows the invention substantially as claimed including first and second substrates; a plurality of data lines 13 on the first substrate; a plurality of gate lines 14 comprising first and second layers, for example, aluminum, on the first substrate perpendicular to the data lines 13; a common line 12 comprising first and second common line layers, for example, chromium, in the pixel region parallel to the gate lines 14; a plurality of common electrodes in the pixel region parallel to the data lines and extending from the common line; a thin film transistor T in the pixel region near the intersection of the one gate line and the one data line, the thin film transistor having a source electrode 17, drain electrode 19, and gate electrode 21; and a liquid

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crystal layer interposed between the first and second substrates (see figs. 1, 2A-2D, and page 3, line 11 to page 8, line 7 of specification).

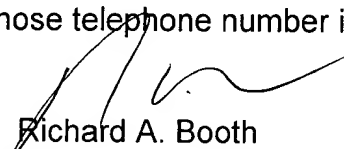
Admitted prior art fails to expressly disclose a protrusion extending from the common line. Lee et al. discloses a protrusion 7 emanating from a common line 16 (see 1 and its description). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of the Admitted prior art so as to include the protrusion of Lee et al. because this will allow for the implementation of the common electrode in a LCD.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard A. Booth whose telephone number is 308-3446. The examiner can normally be reached on Monday-Thursday from 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Niebling can be reached on 308-3325. The fax phone numbers for the organization where this application or proceeding is assigned are 308-7724 for regular communications and 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-1782.



Richard A. Booth
Primary Examiner
Art Unit 2812

May 13, 2003